

NPIC/TSSG/RED-138/70
11 May 1970

MEMORANDUM FOR: Chief, Technical Services & Support Group

ATTENTION : [REDACTED] PPS/TSSG

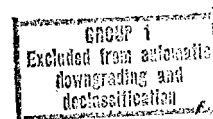
SUBJECT : RED Monthly Report on Significant Events
(April 1970)

A. Significant Items of Interest for April 1970.

1. High Precision Stereocomparator. Acceptance tests on the optical system will be completed by 4 May 1970. Resolution far exceeds specifications, 1200 l/mm on axis as per 800 l/mm in specification. A new schedule indicates preacceptance tests at [REDACTED] will start on 26 August and the instrument will arrive at [REDACTED] about 30 September. 25X1A
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2. 1540 Light Tables. Both 1540 Light Tables have completed a period of T&E. The tables have been returned to their respective contractors and used for demonstrating acceptable solutions to problems discovered during T&E. Both contractors attended separate sessions at NPIC in regard to a critique of problems on the 1540 light tables.
3. Tracking Light Source. In response to [REDACTED] request, [REDACTED] instructed [REDACTED] to conduct a high priority, short-term study on the feasibility of developing a high-intensity, tracking light source for the 1540 light tables. 25X1A
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4. FY-71 R&D Program. Compilation of the FY-71 RED Operating Budget continues with primary emphasis on refining the FY-71 R&D Program Budget.
5. Special CCB Meeting. On 10 April, [REDACTED] SA/PA/RED, hosted a special CCB meeting for the purpose of reviewing the [REDACTED] Production Oriented Color Enlarger proposal. Extensive in-house coordination is being carried out to obtain significant NPIC requirements for the performance specifications of the device. 25X1A
6. Chip Comparator. The first of four [REDACTED] Chip Comparators has been modified by [REDACTED] 25X1A
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Declass Review by NIMA/DOD

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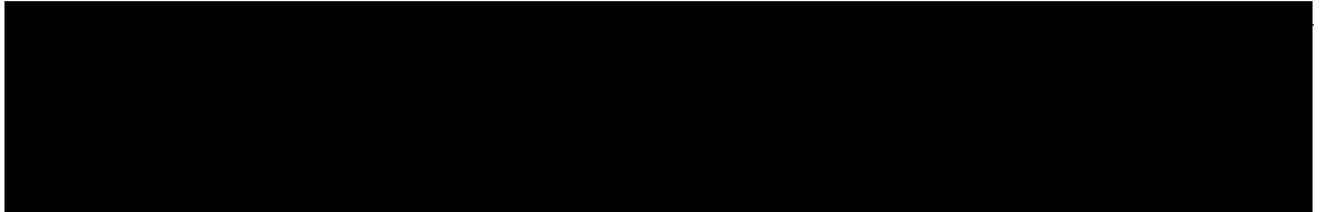


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7. Image Comparison Microstereoscope. [REDACTED] has determined that refabrication of some of the anamorphic prisms will be necessary because of excessive astigmatism and is considering the pros and cons of returning to the vendor, [REDACTED] or making them in-house. The Project Monitor and our consultant will visit [REDACTED] on 5 May to determine effects of this action. A cost overrun could result from these problems.
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9. ATR--Traget Indexing Device. A [REDACTED] Change-in-Scope for two magnetic tape units is in process. Work on the TID is progressing satisfactorily and the scheduled shipping date of 14 September should be met. A preliminary systems check-out is scheduled for 5 June.
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10. Wide-Field, High-Power Anamorphic Stereoviewer. The contract is in the hands of the contractor, and a signature is expected momentarily. The contract sign-off to re-instate the fabrication phase is expected momentarily.
11. Resolution Response from the [REDACTED] Microfiche Jacket Printer. In response to a request from the Chief, CAS/SRB/RED, [REDACTED] of the Exploratory Laboratory determined the resolution response from the [REDACTED] Microfiche jacket printer that is being used by the R&R Division of the PSG. The results were briefly: Resolution with the Jacket - 23 l/mm, out of jacket resolution - 51 l/mm. This resolution response is considered acceptable to the people in the R&R Division who use this device. Further details can be found in RED/ATB-090/70 dated 2 April 1970.
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12. Room Colors for the [REDACTED] Comparator. On 3 April, in response to a request from Chief, Photogrammetry Division, IEG, [REDACTED] investigated several sources of standards for room colors for the [REDACTED] comparator. Recommendations were
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taken from the draft USA Standard for Direct Viewing of Color Transparencies and are recorded in RED/ATB-081/70 dated 3 April 1970.

13. Evaluation of Model II Rhomboids. Beginning on 10 April and continuing through 24 April, ATB participated in a evaluation of the new [REDACTED] Model II Rhomboids. ATB proposed an investigation using PI response to operational imagery under controlled conditions. This was performed under the direction of [REDACTED] using contractual assistance from [REDACTED] and some in-house assistance from the [REDACTED]. The [REDACTED] Task Team was convened in [REDACTED] on 15 April to lay out the experimental design and began work at NPIC on 19 April. The study was completed and the Division Chiefs briefed on 27 April. The results of the study are now being compiled in a formal document for further reference.

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14. Capabilities of [REDACTED] Mr.

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[REDACTED] ATB, sponsored a capabilities briefing by [REDACTED] on 28 April in the Lobby Conference Room. Personnel from all components of the Center attended and heard resumes of [REDACTED] activities presented by [REDACTED] Vice President and Director of Research; [REDACTED] Tests and Measurements Lab, [REDACTED] and [REDACTED] member of the Technical Staff and [REDACTED] Manager of Optical Devices and Displaying. (See RED/ATB-087/70.) Complete resumes of these persons, as well as reprints of [REDACTED] work on laser and TV displays, are available in ATB. The briefing presented included the description of a Slide Home Theater. This equipment, which permits color slides to be viewed on a commercial home color TV set, provides the capability for a low-cost, quick-response method of "jockeying" imagery color to achieve a variety of effects. Success in correcting defective color photography by this method was reported by a [REDACTED] representative. Follow-up plans call for RED seeing a demonstration of this equipment.

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15. Annual Meeting of the Inter-Society Color Council. Mr. [REDACTED] of the Exploratory Lab attended the 39th Annual Meeting of the Inter-Society Color Council in New York City on April 13th and 14th. Details of this meeting are

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high-lighted in RED/ATB-095/70 dated 23 April. Perhaps of greatest significance to NPIC is a problem the ISCC will study in the following year. It was proposed by

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[REDACTED] This problem was accepted for study by the ISCC and is designated as Problem 31---"Standard Methods of Measuring and Specifying Transparency Color Photography." Two men who took part in the discussion in this problem and have worked on the problem are [REDACTED] head of the Color Technology Division of [REDACTED], and [REDACTED] ATB will keep close watch on the activities of this ISCC problem.

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16. Research Problems at [REDACTED] made a trip on 10 April to [REDACTED]

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[REDACTED] has three main Government research programs underway; 1) an aerial duplicating film, 2) a laser recording film, and 3) a "camera speed" film. The duplicating film is being made for [REDACTED] the laser recording film is sponsored by Wright-Patterson AFB; and the "camera speed" film is for [REDACTED] ATB will closely follow these programs and reserve final judgement until they are finished. Copies of all proposals and progress reports have been requested through channels.

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17. Oil Contamination Problems. During the month of April ATB has continued its evaluation of color changing in the cooling oil of [REDACTED] 940 light tables. A summary of this work is reported in RED/ATB-105/70 dated 30 April 1970. ATB recommends that we give preference to the use of alternate methods of cooling light sources in future procurement of light tables in order to alleviate this problem. Chemical analyses of the contaminated green oil from light tables continues. The contaminant has not been identified as yet but indications point to several possible sources. Sufficient information has been obtained to make several recommendations for maintenance of tables on hand and modifications in any additional tables to be built.

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18. Unsolicited Photochemical Processes Study Proposal from

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██████████ An informal proposal for a Study of Novel Photochemical Processes was received from ██████████

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██████████ It essentially proposed a literature review, evaluation, and recommendations of seldom used chemical processes for laboratory trial to assess their potential values for chemical image manipulation. The proposal was sufficiently appealing to warrant our requesting a formal proposal.

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19. Theoretical Color ██████████ for SO-242. The computer generation of the theoretical color ██████████ for SO-242 has been completed. It provides the theoretical C.I.E. and N.C.S. color coordinates for all combinations of various E.N.D. of the three dye layers taken two at a time in increments of .05 E.N.D. units from 0.0 to 2.95 E.N.D. These tables will enable us to obtain the theoretical color coordinates for an unknown color patch on SO-242 from three color desitometric measurements.

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20. Approval of Project Proposals.

a. Scan & Search P. I. Station (Phase II) proposal has been approved by the Executive Director, NPIC, and forwarded for DDI and DDCI approval.

b. The 10" x 10" Stereocomparator proposal was approved by the Executive Director-Comptroller, CIA, on 21 April 1970. This instrument will be developed by the ██████████ and delivered to NPIC in mid-1971.

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c. Vibration Isolation contract has been approved by Director, NPIC.

d. The Zoom 240 ██████████ Eyeiece project was approved by the Director, NPIC, on 3 April 1970.

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e. UV Rear Projection project, Phase II, with ██████████ has been approved.

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f. Modification of the Twin Stage Comparator was approved on 27 April 1970.

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21. Briefings.

- 25X1A a. On 8 April, [REDACTED] briefed a group of new IEG
PI's on the NPIC R&D program.
- 25X1A b. On 23 April, [REDACTED] briefed RADC R&D personnel
on the NPIC R&D program.
- c. A series of briefings have been presented to the
operating divisions on the Advanced Stereo Rhomboids
and 1540 Light Tables. The briefings were designed
to provide the facts necessary to permit decisions
on the procurement of these instruments.
- 25X1A d. [REDACTED] and [REDACTED] of SAC 544th 25X1A
RTG visited RED on 14 April 1970.
- 25X1A e. [REDACTED] 25X1A
[REDACTED] gave a capabilities briefing on 15 April
1970.

B. Anticipated Items of Interest for May 1970.

None.

- C. See Attachment 1 (TOP SECRET - TALENT-KEYHOLE) for the report
of RED/RSB significant events for April 1970.

[REDACTED] 25X1A
Deputy Chief
Research & Engineering Division

Attachment:

1. TCS-6631/70

Distribution:

- Orig. & 5 - TSSG
2 - TSSG/RED

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